

10/812,269

(FILE 'HOME' ENTERED AT 17:48:03 ON 14 OCT 2004)

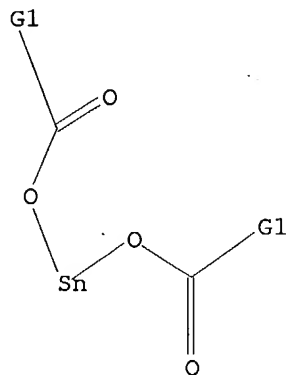
FILE 'REGISTRY' ENTERED AT 17:48:19 ON 14 OCT 2004

L1 STRUCTURE UPLOADED

=> D L1

L1 HAS NO ANSWERS

L1 STR



G1 Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu

Structure attributes must be viewed using STN Express query preparation.

=> S L1

SAMPLE SEARCH INITIATED 17:48:47 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 416 TO ITERATE

100.0% PROCESSED 416 ITERATIONS

15 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 7097 TO 9543

PROJECTED ANSWERS: 68 TO 532.

L2 15 SEA SSS SAM L1

=> S L1 FULL

FULL SEARCH INITIATED 17:48:54 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 8146 TO ITERATE

100.0% PROCESSED 8146 ITERATIONS

303 ANSWERS

SEARCH TIME: 00.00.01

L3 303 SEA SSS FUL L1

=> FIL CAPLUS

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

155.42

155.63

FILE 'CAPLUS' ENTERED AT 17:49:02 ON 14 OCT 2004

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FILE COVERS 1907 - 14 Oct 2004 VOL 141 ISS 16  
FILE LAST UPDATED: 13 Oct 2004 (20041013/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> S L3

L4 1384 L3

=> S L4 AND PY<2003

22519471 PY<2003

L5 1287 L4 AND PY<2003

=> S L5 AND CAPROIC ACID

6453 CAPROIC

3881297 ACID

4761 CAPROIC ACID

(CAPROIC(W)ACID)

L6 1 L5 AND CAPROIC ACID

=> D BIB ABS

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1973:410429 CAPLUS

DN 79:10429

TI Effect of the nature of the solvent and its concentration on the composition of complexes formed in nonaqueous media. I. Dielectric losses of tin(IV) chloride-aliphatic carboxylic acid systems in benzene and toluene

AU Marchenko, V. N.; Pletnev, A. I.

CS Donetsk. Otd. Fiz.-Org. Khim., Inst. Fiz. Khim., Donetsk, USSR

SO Zhurnal Obshchei Khimii (1973), 43(3), 469-74

CODEN: ZOKHA4; ISSN: 0044-460X

DT Journal

LA Russian

AB The data for relation of system composition to dielec. loss and to dielec. constant were shown graphically for SnCl4 system with AcOH in C6H6 solvent; this was supplemented by similar systems with PrCO2H and **caproic acid** (I) in C6H6 and PhMe. Compds. of general type SnCl4.3RCO2H are formed mainly at 70-90% mole % solvent concentration, while SnCl4.2RCO2H

are formed in 95-8 mole % concentration. The greater the interaction between components, the greater is the solvent concentration necessary to form the 1:3 complexes (for AcOH it is 90 mole % C6H6, for I it is 70 mole %). The 1:2 and 1:3 complexes dissociate into current-carrying ions. The system of I-C6H6 is similar to that with PhMe except for somewhat higher conductivity in the latter solvent owing to difference in the dielec. consts. of these hydrocarbons.

=> S L5 AND CAPROATE

3303 CAPROATE

L7 2 L5 AND CAPROATE

=> D 1-2 BIB ABS

L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:625692 CAPLUS

DN 119:225692

TI Preparation of carboxylic acid phenyl esters of high purity

IN Sato, Kunihiisa; Niwano, Masahiro

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

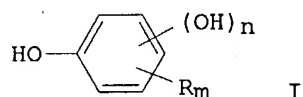
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05140035	A2	19930608	JP 1991-307494	19911122 <--
	JP 3111557	B2	20001127		
PRAI	JP 1991-307494		19911122		
OS	CASREACT 119:225692; MARPAT 119:225692				
GI					



AB Carboxylic acid Ph esters, useful as raw materials for pharmaceuticals and agrochems. and monomers for the synthesis of polymers, are prepared by reaction of aromatic hydroxy compds. (I; R = halo, C1-5 alkyl, Ph; m, n = 0-2) with carboxylic acid anhydrides in the presence of  $\geq 0.01$  weight% part/100 weight part I of compds. selected from carboxylic acid metal salts and metal compds. which are converted into carboxylic acid metal salts by reaction with the carboxylic anhydrides, wherein the metal is selected from group I, IIA, III-V, VIA, VIIA, and VIII metal. A carboxylic acid metal salt shows excellent selectivity as an esterification catalyst and suppresses the formation of byproducts. Thus, 0.1 mol resorcinol (II), 0.24 mol Ac<sub>2</sub>O, 110 mg AcONa were stirred in an oil bath at 60° (bath temperature) for 30 min and at 140° (bath temperature) for 1 h to give a 0.042:0.010:1.000 mixture of II, II monoacetate, and II diacetate vs. a 0.099:0.677:1.000:1.754:2.140 mixture of II, II monoacetate, II diacetate, 2,4-dihydroxyacetophenone, and 2,4-dihydroxyacetophenone monoacetate without the catalyst. Addnl. 21 catalysts such as AcOLi.2H<sub>2</sub>O, AcOCs, Ca(OAc)<sub>2</sub>, Na<sub>2</sub>CO<sub>3</sub>, and KOCMe<sub>3</sub> were also used.

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1976:5149 CAPLUS

DN 84:5149

TI Dibenzyl tin compounds

IN Boboli, Edyta; Rajewski, Marian; Malesnicki, Wladyslaw; Kowalski, Mieczyslaw; Pazgan, Andrzej

PA Instytut Przemyslu Organicznego, Pol.

SO Pol., 4 pp.

CODEN: POXXA7

DT Patent

LA Polish  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	PL 72722	B	19740830	PL 1970-141264	19700612 <--
PRAI	PL 1970-141264		19700612		
AB	Tin compds. (PhCH <sub>2</sub> ) <sub>2</sub> SnLn (L = radicals of mono- or dicarboxylic acids, n = 1,2) useful as thermal stabilizers for polymers, were prepared by the reaction of stoichiometric amts. of (PhCH <sub>2</sub> ) <sub>2</sub> SnCl <sub>2</sub> with mono- or dicarboxylic acids in nonpolar solvents and in the presence of HCl-combining compds. Among the compds. prepared were: laurate, stearate, benzoate, oleate, sebacate, adipate, maleate phthalate, 2-ethylhexyl maleate, 2-ethylhexyl phthalate, cyclohexyl phthalate, propionate, bis(methyl sebacate), bis(cetyl succinate), and <b>caproate</b> .				

=> S L5 AND (LOW MELTING POINT)

2199765 LOW

206733 MELTING

566857 POINT

1297 LOW MELTING POINT

(LOW(W)MELTING(W)POINT)

L8 0 L5 AND (LOW MELTING POINT)

=> S L5 AND LIQUID

662254 LIQUID

L9 35 L5 AND LIQUID

=> D 1-35 BIB ABS

L9 ANSWER 1 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:876821 CAPLUS

DN 134:16832

TI Coated sheet and food packaging using the same

IN Iwamiya, Yoko; Goda, Kazuhiko

PA Kazari-Ichi Co., Ltd., Japan

SO Eur. Pat. Appl., 24 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1059383	A1	20001213	EP 2000-110632	20000518 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002001873	A2	20020108	JP 2000-136906	20000510 <--
	US 6403183	B1	20020611	US 2000-572652	20000516 <--
	CN 1277107	A	20001220	CN 2000-109079	20000606 <--
PRAI	JP 1999-162811	A	19990609		
	JP 2000-119176	A	20000420		
	JP 2000-136906	A	20000510		

AB The object of the present invention is to provide a novel coated material taking the place of conventional paper materials or the like; to provide a film or sheet for packaging foods having oxygen barrier properties and free from generation of dioxin or environmental hormones; and to provide a transparent food container or the like having the properties mentioned above, in which food contained can be cooked at a higher temperature than 200°C with a microwave oven. The object of the present invention is accomplished with a coated material comprising a paper substrate or a fiber substrate and a polymer membrane having a polysiloxane structure as the main structure provided on the surface of at least one side of the

substrate, by a film or sheet for packing foods and a food container made of the coated material.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:376948 CAPLUS

DN 133:5959

TI Organosilicon-type coating compositions, coating process, films thereof, coated articles, and two-liquid coating sets

IN Morimoto, Koji; Miyagawa, Kenji; Nakagawa, Koji; Nokita, Motohiro

PA Chugoku Marine Paints, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000154348	A2	20000606	JP 1998-331286	19981120 <---
PRAI	JP 1998-331286		19981120		

AB The comps. forming films with excellent soiling resistance comprise (A) Si-containing vinyl polymers, (B) organometallic compound hardeners, and (C) hydrophilic nonionic surfactants. Thus, a composition of a 70:30 Me methacrylate-KBM 503 copolymer 60, Megafac F 171 (hydrophilic fluoro surfactant) 1, Ti-Pure R 960 (TiO<sub>2</sub>) 30, Aerosil 200 0.5, BuOAc 9.5, Neostann U 200 (dibutyltin diacetate) 0.5, and TBZR 0.5 part was sprayed on a SUS 304 sheet and dried to form a coating showing good resistance to soiling by rain.

L9 ANSWER 3 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:274410 CAPLUS

DN 133:100546

TI Online UV-photooxidation with peroxodisulfate for automated flow injection and for high-performance liquid chromatography coupled to hydride generation atomic absorption spectrometry

AU Tsalev, D. L.; Sperling, M.; Welz, B.

CS Department of Applied Research, Bodenseewerk Perkin-Elmer GmbH, Uberlingen, D-88662, Germany

SO Spectrochimica Acta, Part B: Atomic Spectroscopy (2000), 55B(4), 339-353

CODEN: SAASBH; ISSN: 0584-8547

PB Elsevier Science B.V.

DT Journal

LA English

AB An automated online UV photooxidn. with peroxodisulfate of some environmentally relevant organoarsenic and organotin compds. in a system built from com. available modules was studied and optimized with a view to both species-independent quantification of the total arsenic or tin in samples containing different organic species by flow injection hydride

generation

atomic absorption spectrometry (FI-HGAAS) and speciation anal. by coupled high-performance liquid chromatog. (HPLC) with HGAAS detection. 80% For the inorg. tin, dimethyltin, trimethyltin, triethyltin, tripropyltin, triphenyltin, monobutyltin, dibutyltin and tributyltin but only approx. 15% for tetrabutyltin. The best characteristic masses in integrated absorbance (Aint) and peak-height (Ap) measurements, resp., are 30 pg and 480 pg for arsenic(V) and 22 pg and 410 pg for tin(IV), employing 100-µl injections. The RSDs are 5.5% and 8.5% at 5 ng As(V) levels and 4.3% and 6.4% at 10 ng Sn(IV) levels in Aint and Ap modes, resp. The limits of detection (LOD, 3σ) for As are 7 µg l<sup>-1</sup> and 4 µg l<sup>-1</sup> in FI-UV-HGAAS and HPLC-UV-HGAAS, resp. The LODs for i-Sn(IV) are 2 µg

l-1 in FI-UV-HGAAS, with both Aint and Ap measurements. The sample throughput rates are 20 and 12 samples per h with 10-m and 15-m knotted reactors (i.d. 0.5 mm), resp. Urine certified reference materials containing 0.052-0.48 µg ml<sup>-1</sup> As have been analyzed for their total arsenic content.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1999:751471 CAPLUS  
DN 132:4105  
TI Solventless one-**liquid** moisture-curable polyisocyanate  
prepolymer compositions  
IN Watanabe, Shinichiro  
PA Asahi Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11322879	A2	19991126	JP 1998-140214	19980521 <--
PRAI	JP 1998-140214		19980521		
AB	The compns., useful for coatings, sealing materials, adhesives, etc., contain a 5/95-95/5 mixture of (A) aliphatic and/or alicyclic diisocyanate-based polyisocyanate prepolymers having viscosity 50-2000 mPa-s at 25° and nonvolatile contents ≥98%, (B) polyisocyanate prepolymers prepared from polyether polyols (Mn 500-10,000) and excess amts. of aliphatic and/or alicyclic diisocyanates or polyisocyanates, and 0.005-5% (based on the mixture) curing accelerators. Thus, polymerizing HDI in the presence of Me4N caprylate (I) as isocyanuration catalyst gave a prepolymer (A; nonvolatile contents 99.2%, viscosity 1300 mPa-s), sep. polymerizing HDI 400, isophorone diisocyanate 100, and polypropylene glycol (PPG 2000) 20 g in the presence of I gave prepolymer (B), mixing A 20, B 80, and dibutyltin dichloride 0.010 g, applying the resulting composition on a substrate at 200-µm thickness, and curing at 20° and relative humidity 65% gave a tack- and void-free coating.				

L9 ANSWER 5 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1998:685053 CAPLUS  
DN 129:296214  
TI Microencapsulated **liquid** crystal and method and system for using it  
IN Fergason, James L.  
PA USA  
SO PCT Int. Appl., 57 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9844382	A1	19981008	WO 1998-US6181	19980327 <--
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				

AU 9867855	A1	19981022	AU 1998-67855	19980327 <--
US 6204900	B1	20010320	US 1999-407523	19990928 <--
PRAI US 1997-42444P	P	19970328		
US 1997-42194P	P	19970331		
WO 1998-US6181	W	19980327		

AB A liquid-crystal display device, materials for making the device, and a method of making and using the device are disclosed. The liquid crystal used in the display device is microencapsulated in a containment medium and the memory capability of the device allows the device to hold a prescribed optical response condition even though one of the inputs changes between resp. states or values.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:684926 CAPLUS

DN 129:296213

TI Microencapsulated **liquid** crystal with improved dye stability for **liquid** crystal display device

IN Hsu, Ying Yen

PA USA

SO PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9844068	A2	19981008	WO 1998-US6160	19980327 <--
	W: JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6174467	B1	20010116	US 1997-827574	19970328 <--
	JP 11080734	A2	19990326	JP 1998-122608	19980330 <--
	TW 515837	B	20030101	TW 1998-87114253	19980828
	US 6120701	A	20000919	US 1999-388654	19990902 <--
PRAI	US 1997-827574	A	19970328		

AB Liquid crystals are microencapsulated using an interfacial polymerization reaction

which creates a combination of polyurethane and polyurea polymers which form the capsule walls surrounding the discrete liquid crystal droplets. The formed capsule walls are designed to have an adjustable refractive index to allow for the matching of the refractive index to that of the liquid crystal and polymeric binder materials. This allows the production of a liquid crystal droplet surrounded by a polymer film, which is optically clear when the liquid crystal director is aligned with the elec. field. The microencapsulated liquid crystal droplets improve the dye stability of a dichroic dye and enhance the contrast of a liquid crystal display.

L9 ANSWER 7 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:455346 CAPLUS

DN 125:100260

TI Correcting **liquid** for waterless lithographic plates

IN Koizumi, Shigeo; Urabe, Yoshihiko; Ooba, Toshio

PA Fuji Photo Film Co Ltd, Japan; Shinetsu Chemical Industry Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08110632	A2	19960430	JP 1994-246266	19941012 <--

PRAI JP 1994-246266 19941012

AB The title correcting liquid, used for waterless lithog. plates containing an ink-repellent silicone rubber layer, contains 10-30 parts linear diorganopolysiloxane having  $\geq 1$  functional group on each end, 2-8 parts tetraacetoxysilane (I), 0.001-1 part Sn-type condensation catalyst, and 50-85 parts monocarboxylic acid-monohydric alc. ester with b.p. 50-120° and dielec. constant 5-8 at 20° as a diluting solvent per 100 parts liquid. The correcting liquid shows high hardening rate and storage stability. Thus, a correcting liquid comprised dimethylhydroxysilyl-terminated dimethylpolysiloxane, I, dibutyltin octanoate, AcOPr-iso, and additives.

L9 ANSWER 8 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:916516 CAPLUS

DN 123:304311

TI **Liquid** composition for preparation of electrically conductive layers, preparation of the layers, and optical interference filters containing the layers

IN Arfsten, Nanning

PA Opto-Chem Glas-Coating GmbH, Germany

SO Ger. Offen., 3 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4407201	A1	19950907	DE 1994-4407201	19940304 <--
PRAI	DE 1994-4407201		19940304		

OS MARPAT 123:304311

AB The liquid composition contains Sn compds. of the general formula  $X_2SnY_2$ , where X

= Cl, Br, I, F, or  $NO_3$ ; Y = OOCR; and R =  $HCH_3$ , Et, etc., and chelate-forming substances, such as acetylacetone, diacetone alc., and Et acetoacetate, are added. The optical interference filter contains at least a conductive, transparent  $SnO_2$  layer and a highly refractive  $TiO_2$  layer, wherein the  $SnO_2$  layer is prepared from a liquid composition as

described

above and the  $TiO_2$  layer is prepared from a liquid composition containing

$Cl_2TiY_2$ ,

where Y = OR and R = Me, Et, or COMe.

L9 ANSWER 9 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:297585 CAPLUS

DN 122:58354

TI Blocked aliphatic and/or alicyclic polyisocyanate compositions for one-**liquid** polyurethanes curable at low temperature

IN Tanimoto, Yoichi; Kase, Mitsuo

PA Dainippon Ink & Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06192364	A2	19940712	JP 1993-28074	19930217 <--
	JP 3289793	B2	20020610		
PRAI	JP 1992-290101	A1	19921028		

OS MARPAT 122:58354

AB The title compns. for coatings, adhesives, textile finishes, etc. contain curing catalysts  $R_1R_2R_3N+CH_2CHR_4OH$  X- (at least one of  $R_1-3$  is  $C \geq 4$ )



hydrocarbyl with or without N, O or S, while others being C1-20 hydrocarbyl, and R1-3 may be connected together; R4 = H, C1-20 (hydroxy)hydrocarbyl; X = OH, C1-20 hydrocarbyl group-containing carboxylates or phenolates). A composition from MEK oxime-blocked Burnock DN-901S, Acrylic A-801, dioctyltin diacetate, 2-hydroxypropyltributylammonium 2,2-dimethylpentanoate, and BuOAc was storable >1 mo without viscosity change at 40° and gave baked coating (140°, 30 min, on metal screen) with good alkali resistance.

L9 ANSWER 10 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:11058 CAPLUS

DN 122:57453

TI Aqueous polyether-modified curable organosiloxane **liquid** composition and its use

IN Naito, Hiroyuki

PA Japan

SO Eur. Pat. Appl., 38 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 594211	A2	19940427	EP 1993-117182	19931022 <--
	EP 594211	A3	19950419		
	R: DE, FR, GB, IT				
	JP 07002582	A2	19950106	JP 1993-258746	19931015 <--
	JP 2738904	B2	19980408		
	CA 2108802	AA	19940423	CA 1993-2108802	19931020 <--
	AU 9350206	A1	19940505	AU 1993-50206	19931022 <--
	AU 675456	B2	19970206		
	US 5668212	A	19970916	US 1996-680702	19960717 <--
PRAI	JP 1992-284761	A	19921022		
	JP 1992-267544	A	19921006		
	US 1993-138421	B1	19931020		

OS MARPAT 122:57453

AB A title homogeneous composition contains (A) organosilicon compound (containing  $\geq 1$  polyether group as a side chain or as a terminal group) modified by 30-50% H<sub>2</sub>O, (B) a liquid organopolysiloxane, (C) a crosslinking agent, (D) a curing catalyst and, optionally, (E) a filler. This composition undergoes uniform curing when exposed to the atmospheric of a temperature of  $\leq 300$  °C, to form a siloxane polymer in a form of a film, fiber, a composite structure, a composite sheet or a building material. The composition can also be used as a coating composition or varnish. A

typical

composition prepared from polyoxyalkylene-polydimethylsiloxane (SH 3746) preblended with 20% H<sub>2</sub>O 5, low-mol-weight Me Ph silicones 60, a

high-mol.-weight

Me Ph silicone 10, a Bu<sub>2</sub>Sn(OAc)<sub>2</sub> 5 parts, cured after 72 h at 25° to give a heat-resistant film with good hardness.

L9 ANSWER 11 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:113296 CAPLUS

DN 118:113296

TI Method for manufacturing color filters for **liquid** crystal display device

IN Iwamoto, Masao; Kimura, Kuniko

PA Toray Industries, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04123006	A2	19920423	JP 1990-245061	19900914 <--
	JP 2946700	B2	19990906		
PRAI	JP 1990-245061		19900914		

AB The title color filter is manufactured by (1) laminating a photosensitive resin layer and a silicone rubber layer successively on a patterned black matrix-formed transparent substrate, (2) exposure through the black matrix by photolithog., (3) development to form parts from which either the silicone rubber layer alone or both the former and the photosensitive resin layer are removed in a desired pattern., and (4) coloring the coating-removed parts in red, green, and blue 3 primary colors. After coloring, the entire surface is exposed and the surface silicone rubber layer of the shaded film parts is removed to form a topcoating. The process forms ink-repellent partition walls working effectively to prevent smudges and spread of an ink in the coloring process using the printing or ink-jet method and provides a liquid crystal display color filter of high quality and low cost.

L9 ANSWER 12 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:498352 CAPLUS

DN 117:98352

TI Trialkyltin compounds as neutral carriers for anions in PVC **liquid** membranes, and complex formation with oxoanions

AU Fluri, Karl; Koudelka, Juraj; Simon, Wilhelm

CS Dep. Org. Chem., Swiss Fed. Inst. Technol., Zurich, CH-8092, Switz.

SO Helvetica Chimica Acta (1992), 75(4), 1012-22

CODEN: HCACAV; ISSN: 0018-019X

DT Journal

LA English

AB Under the influence of an elec. field, trialkyltin compds. of the type R<sub>3</sub>SnX behave as elec. neutral carriers for anions in poly(vinyl chloride) liquid membranes. The interaction of organotin compds. with oxoanions was studied in the organic phase by <sup>119</sup>Sn-NMR-monitored titrns. In the case of Bu<sub>3</sub>SnCl, no appreciable amount of complex was formed with HSO<sub>4</sub><sup>-</sup>, while H<sub>2</sub>PO<sub>4</sub><sup>-</sup> gave rise to a new species. Dioctyltin dichloride and dioctyltin diacetate formed a 1:2 (salt/ligand) complex with HPO<sub>4</sub><sup>2-</sup>.

L9 ANSWER 13 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:407749 CAPLUS

DN 117:7749

TI Effective methods for enantioselective analysis of glycidol derivatives by **liquid** chromatography.

AU Kennedy, Joseph H.; Weigel, Leland O.

CS Chem. Process Res. Dev., Lilly Res. Lab., Indianapolis, IN, 46285, USA

SO Chirality (1992), 4(2), 132-5

CODEN: CHRLEP; ISSN: 0899-0042

DT Journal

LA English

AB Methodol. for determination of the enantiomeric purity of 16

2,3-epoxy-1-propanols

is delineated. Conversion of these epoxy alcs. with naphthyl isocyanate into the 1-naphthyl carbamates is catalyzed by dibutyltin diacetate. Enantiomers of these carbamates are resolved on a Chiralcel OD column. Advantages of this method include mildness of reaction conditions, non-reliance on diastereomeric derivatization, and appendage of a UV-absorbing chromophore to the analyte.

L9 ANSWER 14 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:195583 CAPLUS

DN 116:195583

TI Two-liquid-type, heat-curable polyisocyanate-polyol-epoxy resin composition and manufacture of a shaped article therefrom  
IN Yamada, Takeyoshi; Umetani, Hiroyuki  
PA Teijin Ltd., Japan  
SO Eur. Pat. Appl., 20 pp.  
CODEN: EPXXDW

DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 469459	A2	19920205	EP 1991-112466	19910725 <--
	EP 469459	A3	19920722		
	R: DE, FR, GB, IT, NL				
	CA 2047301	AA	19920131	CA 1991-2047301	19910717 <--
	JP 05025245	A2	19930202	JP 1991-211387	19910730 <--
	JP 2613330	B2	19970528		
	US 5223598	A	19930629	US 1992-942104	19920908 <--
PRAI	JP 1990-199202		19900730		
	JP 1991-133254		19910510		
	US 1991-732506		19910718		

OS MARPAT 116:195583

AB Heat- and impact-resistant moldings with good mech. strength and machinability are manufactured by thermally curing a component containing a compound

having  $\geq 2$  isocyanate groups with a component containing a compound having  $\geq 2$  OH groups, a compound having  $\geq 2$  epoxy groups, and a curing agent, with equiv ratio of OH/NCO being (10-40):100, epoxy/NCO (5-20):100, and (OH + epoxy)/NCO (15-45):100. The polyol-polyepoxide-curing agent component exhibited good storage stability, and the curing agent effectively catalyzes the trimerization of the polyisocyanate and the formation of an oxazolidone ring structure from the polyisocyanate and the polyepoxide. Thus, a mixture containing polyether polyols (OH equiv 0.0037/g) 80, Epikote 828 (epoxy equiv 0.00521/g) 20, and PhCH<sub>2</sub>NMe<sub>2</sub> 0.24 parts exhibited viscosity 402 and 518 cP before and after 30 days, resp. A composition containing 100 parts latter mixture and 200 parts

carbodiimide-modified

MDI (NCO equiv 0.0069/g) was molded 30 min at 140° and post-cured 5 h at 180° to give a 3-mm reddish brown transparent sheet with flexural strength 14 kg/mm<sup>2</sup>, heat-distortion temperature 235°, notched Izod impact strength 5.8 kg cm/cm, and Shore D hardness 90.

L9 ANSWER 15 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1991:123854 CAPLUS

DN 114:123854

TI Two-liquid urethane compositions with extended potlife

IN Tsukahara, Yoshimitsu; Masuda, Kazuo; Imai, Satoshi

PA Sankyo Organic Chemicals Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02151651	A2	19900611	JP 1988-307202	19881205 <--
PRAI	JP 1988-307202		19881205		

AB Title compns., useful as adhesives and coatings, contained organotin monocarboxylate salts and S-containing carboxylic acids. Thus, mixing Takenate D-170 N (TDI compound) 100 with Acrylic A-801 (polyol) 554, dioctyltin didodecanoate 0.001 and thioglycolic acid (I) 0.001 part gave a composition showing PhMe-dilution (at Ford Cup test to 185) gel time 5-10 h,

and

polyisocyanate-PhMe 100:84 dilution gel time  $\geq 10$  h, vs.  $< 5$  and 5-10, resp. in the absence of the I.

L9 ANSWER 16 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1990:428188 CAPLUS  
DN 113:28188

TI **Liquid** coating compositions and method for forming  
fluorine-doped tin oxide coating on glass

IN Gitlitz, Melvin H.; Russo, David A.

PA M and T Chemicals Inc., USA

SO Eur. Pat. Appl., 5 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 357263	A1	19900307	EP 1989-308096	19890809 <--
	EP 357263	B1	19930728		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CN 1040397	A	19900314	CN 1989-105600	19890808 <--
	CN 1029016	B	19950621		
	AT 92014	E	19930815	AT 1989-308096	19890809 <--
	ES 2043024	T3	19931216	ES 1989-308096	19890809 <--
	JP 02083238	A2	19900323	JP 1989-209731	19890815 <--
	JP 2530027	B2	19960904		
	CA 1333515	A1	19941220	CA 1989-608328	19890815 <--
	US 5000790	A	19910319	US 1990-513728	19900424 <--
PRAI	US 1988-232962		19880816		
	EP 1989-308096		19890809		

OS MARPAT 113:28188

AB. The coating comps. comprise .apprx.50-80 weight% organotin di- or tri-carboxylate and 20-50 weight% organic fluoroacid. The coating is formed by applying vaporized composition to heated glass surface. The oxide coatings have bulk resistivities (.apprx. $10^{-4}$   $\Omega \cdot \text{cm}$ ) and Gardner haze value.

L9 ANSWER 17 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1990:78178 CAPLUS  
DN 112:78178

TI Temperature-activated polymer-supported crosslinking catalysts for  
**liquid** polymers

IN Scott, Keith William; Willoughby, Bryan Godfrey

PA Rapra Technology Ltd., UK

SO Brit. UK Pat. Appl., 24 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	GB 2210624	A1	19890614	GB 1988-28999	19881212 <--
	GB 2210624	B2	19910403		
	AU 8826715	A1	19890615	AU 1988-26715	19881209 <--
	US 4954472	A	19900904	US 1988-282038	19881209 <--
	EP 321165	A2	19890621	EP 1988-311722	19881212 <--
	EP 321165	A3	19900124		
	R: BE, DE, ES, FR, GB, IT, NL				
	JP 01230617	A2	19890914	JP 1988-313641	19881212 <--
PRAI	GB 1987-29069		19871212		

AB Temperature-activated catalysts, useful for curing polyurethane or liquid polymers, e.g., polyesters or silicones, comprise Co salts or organotin

comps. supported on a linear polymer which is incompatible with the reacting polymer phase. In particular, binding the catalysts into a glassy polymer phase provides catalysts with marked temperature-dependent characteristics. High activity is also obtained when the catalysts-supporting polymer is mobile or rubbery. Thus, 20.42 g allyl alc.-styrene copolymer (I) and 6.07 g bis(triphenyltin) oxide (II) were dissolved in CH<sub>2</sub>Cl<sub>2</sub>, the solvent was removed under reduced pressure to give a glassy catalyst containing 7.6% Sn having glass transition temperature 60°. The catalyst was ground to fine powder and used to catalyze the cure of OH-terminated polyester (Diorez 520) with a polymeric MDI (Bostikure G) showing t<sub>80</sub> (time required for 80% of cure) 7.0 h at 20° and 15 min at 100°, compared with 11 min and 6 min, resp., using tributyltin oleate instead of I and II. Thus, the activity of the catalyst increased markedly with increasing temperature

L9 ANSWER 18 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:575952 CAPLUS

DN 111:175952

TI Crosslinkable pressure-sensitive rubber adhesives containing a liquid organohydrogenpolysiloxane

IN Blizzard, John D.; Swihart, Terence J.

PA Dow Corning Corp., USA

SO U.S., 9 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4831080	A	19890516	US 1988-189004	19880502 <--
	NO 8901361	A	19891103	NO 1989-1361	19890330 <--
	FI 8902057	A	19891103	FI 1989-2057	19890428 <--
	EP 340979	A2	19891108	EP 1989-304275	19890428 <--
	EP 340979	A3	19901114		
	EP 340979	B1	19930107		
	R: BE, DE, FR, GB, NL, SE				
	AU 8933881	A1	19891102	AU 1989-33881	19890501 <--
	AU 607067	B2	19910221		
	JP 02016183	A2	19900119	JP 1989-109218	19890501 <--
PRAI	US 1988-189004		19880502		

AB Pressure-sensitive adhesive constructions, having improved adhesion, which increases with the passage of time, are prepared by contacting a first component comprising a natural or synthetic rubber pressure-sensitive adhesive and a liquid organohydrogen polysiloxane, and a curing agent. Thus, 1.0% liquid organohydrogen polysiloxane (I) was mixed with Gelva MS 263 (II; in acrylic pressure-sensitive adhesive solution) to form a first component. Then, II was mixed with 5.0% dibutyltin diacetate (III) curing agent to form the second component. Each of the components was then applied to an Al foil, dried to a film, cut into strips and pressed together at ambient temperature to form a lap joint having a 1-in. overlap.

The lap joints were aged at ambient temperature for 1 day and for 28 days showing shear adhesion 73 lb and 86 lb, resp., compared with 41 and 29, resp., for similar lap joints without liquid I and III.

L9 ANSWER 19 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:147455 CAPLUS

DN 106:147455

TI Copolyester with melt anisotropy

IN Nozawa, Seiichi; Kidai, Osamu; Kasai, Atsushi

PA Mitsubishi Chemical Industries Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61218630	A2	19860929	JP 1985-60318	19850325 <--
	JP 06027184	B4	19940413		
PRAI	JP 1985-60318		19850325		

AB The title polyesters are prepared by reacting 5-95 mol.% -COR1CO2R2O- present as the structure repeating units in dicarboxylic acid-diol oligoesters or polyesters with 5-95 mol.% HOR3CO2H in the presence of Sn catalysts, where  $\geq 60$  mol.% R1 are C6-20 divalent aromatic hydrocarbyls with  $\geq 4$ C between the CO groups and  $< 40$  mol.% R1 are divalent C6-20 aromatic hydrocarbyl, divalent C4-20 alicyclic hydrocarbyl, and/or divalent C1-40 aliphatic hydrocarbyl (the aromatic ring H's are optionally substituted with halogens, C1-4 alkyls or alkoxy groups) with  $< 3$ C sepy. the CO groups; R2 is a divalent C2-40 aliphatic hydrocarbyl, C4-20 alicyclic hydrocarbyl, C6-20 aromatic hydrocarbyl (the aromatic ring H's are optionally substituted with halogens, C1-4 alkyls or alkoxy groups), or divalent poly(alkylene oxide) having mol. weight 80-8000; and R3 = R1. Thus, p-HOC6H4CO2H, PET oligomer, and butylstannoic acid are polymerized

L9 ANSWER 20 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1987:138923 CAPLUS

DN 106:138923

TI Aromatic polyester-polyamides

IN Matsumoto, Mitsuo

PA Kuraray Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61236827	A2	19861022	JP 1985-79066	19850412 <--
PRAI	JP 1985-79066		19850412		

AB A melt-extrudable aromatic polyester-polyamide is prepared by direct melt polymerization (at 200-400°) of 6-hydroxy-2-naphthoic acid (I) (or a mixture with 4-hydroxybenzoic acid) 20-90, HO(CO)mZCOZ'-p-C6H4NHCOZ(CO)nOH (II) (Z = divalent aromatic compound; Z1 = O, NH; m, n = 0, 1) 10-80, Z(CO2H)2 (Z = divalent aromatic compound) 0-40, Z(OH)2 (Z = divalent aromatic compound) 0-40 mol%

in the presence of a Group V metal compound as a catalyst. A mixture of I 22.56, II (m, n = 0; Z = 2,6-naphthalene; Z1 = NH) 40.50, and terephthalic acid 14.94 parts was melt-polymerized in the presence of 0.156 part Bu2Sn diacetate at 280-340° to give a polymer (reduced viscosity 3.013 dL/g in 0.1% C6F5OH at 60°). The polymer was then melt-spun at 315°, flow rate 0.18 g/min, and take-up rate 230 m/min to give a fiber (12.1 denier) exhibiting tensile strength 15.1 g/denier, elongation 3.6%, and Young's modulus 570 g/denier after heat treatment at 265° for 1 h and at 285° for 8 h.

L9 ANSWER 21 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1986:114866 CAPLUS

DN 104:114866

TI **Liquid** coating composition for producing high-quality, high-performance fluorine-doped tin oxide coatings

IN Russo, David Alan; Lindner, Georg Heinrich

PA M and T Chemicals Inc., USA

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW  
 DT Patent  
 LA English  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 158399	A2	19851016	EP 1985-200495	19850401 <--
	EP 158399	A3	19860917		
	EP 158399	B1	19881102		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
	AU 8540549	A1	19851017	AU 1985-40549	19850327 <--
	AU 575141	B2	19880721		
	FI 8501247	A	19851011	FI 1985-1247	19850328 <--
	FI 79087	B	19890731		
	FI 79087	C	19891110		
	ZA 8502396	A	19851127	ZA 1985-2396	19850329 <--
	HU 37522	A2	19851228	HU 1985-1209	19850329 <--
	HU 200855	B	19900828		
	AT 38371	E	19881115	AT 1985-200495	19850401 <--
	IN 163565	A	19881008	IN 1985-CA247	19850402 <--
	IL 74817	A1	19880630	IL 1985-74817	19850404 <--
	CN 85102350	A	19860709	CN 1985-102350	19850408 <--
	CN 1009917	B	19901010		
	DK 8501584	A	19851011	DK 1985-1584	19850409 <--
	DK 161089	B	19910527		
	DK 161089	C	19911230		
	NO 8501403	A	19851011	NO 1985-1403	19850409 <--
	NO 169584	B	19920406		
	NO 169584	C	19920715		
	BR 8501654	A	19851210	BR 1985-1654	19850409 <--
	JP 61000586	A2	19860106	JP 1985-73632	19850409 <--
	JP 04006796	B4	19920206		
	ES 542054	A1	19860616	ES 1985-542054	19850409 <--
	CA 1239759	A1	19880802	CA 1985-478679	19850410 <--

PRAI US 1984-598623 19840410  
 US 1984-687065 19841228  
 US 1985-705595 19850226  
 EP 1985-200495 19850401

AB F-doped SnO<sub>2</sub> coatings with low sheet resistance (<30 Ω/sq) and high visible light transmission (>80% through thicknesses of 160-220 nm) are obtained, e.g. on glass substrates, from liquid compns. comprising 1-30 weight% organic F dopant compound and 70-99 weight% organotin compound by vaporization

at 100-400°, vapor contact with the substrate at >400 ° to <700°, and deposition for ≤45 s. Thus, a coating of a liquid mixture containing trifluoroacetic acid 4.6, EtOAc 2.3, and monobutyltin trichloride 93.1 weight% applied in 5.3 s by vapor deposition with air carrier (humidity 47% at 18°) at 150° on glass at 655° produced a coated layer having film thickness 200 nm, a sheet elec. resistance of 22 Ω/sq, and elec. conductivity 2270 Ω-lcm-l.

L9 ANSWER 22 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1983:81903 CAPLUS  
 DN 98:81903  
 TI Crosslinked organopolysiloxanes exhibiting **liquid** crystal properties  
 IN Finkelmann, Heino; Rehage, Guenther; Kreuzer, Franz Heinrich  
 PA Consortium fuer Elektrochemische Industrie G.m.b.H., Fed. Rep. Ger.  
 SO Ger. Offen., 15 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3119459	A1	19821209	DE 1981-3119459	19810515 <--
	US 4388453	A	19830614	US 1982-375152	19820505 <--
	EP 66137	A1	19821208	EP 1982-104154	19820513 <--
	EP 66137	B1	19850731		
	R: BE, CH, DE, FR, GB, IT, NL				
	JP 58017119	A2	19830201	JP 1982-81331	19820514 <--
	JP 61040250	B4	19860908		
	CA 1185041	A1	19850402	CA 1982-402953	19820514 <--
	JP 62030123	A2	19870209	JP 1986-93479	19860424 <--
	JP 63035173	B4	19880713		
PRAI	DE 1981-3119459		19810515		

AB A simple method is described for the preparation of crosslinked organopolysiloxane nematic liquid crystals in which the polysiloxane is mixed with vinyl-substd. compds. with mesogenic properties in the presence of a catalyst such as a Pt compound. Thus, a solution was mixed in toluene of 1 mol. of a trimethylsiloxy-end-blocked 1:1 mixed polymer from hydromethylpolysiloxane and dimethylpolysiloxane, 0.45 mol of methoxyphenyl 4-propene-2-hydroxybenzoate, and 0.05 mol of a dimethylpolysiloxane with vinyl end groups. A catalyst of the reaction product of H<sub>2</sub>PtCl<sub>6</sub> and decene was added in 10 ppm. and the mixture heated to 60°. The mixture was then extracted with toluene to give a nematic liquid crystal with nematic range 264-285 K.

L9 ANSWER 23 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1981:16335 CAPLUS

DN 94:16335

TI **Liquid** carbodiimide-modified organic polyisocyanates employing organotin catalysts

IN Narayan, Thirumurti

PA BASF Wyandotte Corp., USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4228095	A	19801014	US 1979-67793	19790820 <--
	CA 1145350	A1	19830426	CA 1980-354267	19800618 <--
	GB 2059950	A	19810429	GB 1980-27167	19800819 <--
PRAI	US 1979-67793		19790820		

AB Carbodiimide-modified polyisocyanates are prepared by heating the polyisocyanates at >200° for 0.5-5 h in the presence of 0.001-1.0 weight% of an organotin catalyst RR<sub>1</sub>SnR<sub>2</sub><sub>2</sub>, RR<sub>1</sub>SnO, (RR<sub>1</sub>R<sub>3</sub>Sn)<sub>2</sub>O, or Sn(O<sub>2</sub>CR<sub>4</sub>)<sub>2</sub> (R, R<sub>1</sub> = C<sub>1</sub>-18 alkyl, aryl, alicyclic, heterocyclic, oxyalkyl, acyloxy; R<sub>2</sub> = C<sub>1</sub>-18 alkyl, aryl, alicyclic, heterocyclic, oxyalkyl, acyloxy, alkylthio, (alkoxycarbonyl)alkylthio; R<sub>3</sub> = alkyl, aryl; R<sub>4</sub> = C<sub>1</sub>-18 alkyl, aryl, alicyclic, heterocyclic). Thus, 500 g 4,4'-diphenylmethane diisocyanate [101-68-8] (isocyanate content 33.2%) was heated 2 h at 200° with 0.25 part dibutyltin diacetate [1067-33-0] to give a product with isocyanate content 30.2%. After overnight storage, the isocyanate content was 29.7% and decreased slowly to 28.9% after 7 mo storage.

L9 ANSWER 24 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1968:13127 CAPLUS

DN 68:13127

TI Dialkyltin diacetate derivatives

AU Maeda, Yutaka; Okawara, Rokuro



CS Osaka Univ., Osaka, Japan  
SO Journal of Organometallic Chemistry (1967), 10(2), 247-56  
CODEN: JORCAI; ISSN: 0022-328X

DT Journal  
LA English

AB A series of dialkyltin diacetates and their derivs.,  $R_2Sn(OAc)_2$ ,  $[(AcO)R_2Sn]_2O$  and  $(AcO)R_2SnOSnR_2(OH)$  ( $R = Me, Et, Pr, Bu$ ), were prepared. Dialkyltin diacetates are monomeric in benzene, having a nonsym. chelated octahedral configuration; bridging of acetoxy groups seems to occur in the neat **liquid** or in the crystalline state.  $[(AcO)R_2Sn]_2O$  are dimeric at moderate concns. and dissociate to monomers in dilute benzene and  $CHCl_3$ . This change is reflected in changes of the  $CO_2$  and  $SnO$  ir bands. The dimeric Me compound showed two tin-methyl proton chemical shifts with a small difference. Mol. weight of  $(AcO)Bu_2SnOSnBu_2(OH)$  increases with concentration

from that of dimer. This seems to be caused by the bridging of the acetoxy groups among dimers. 30 references.

L9 ANSWER 25 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1967:454234 CAPLUS

DN 67:54234

TI Ethane-homologous mixed hydrides,  $H_3SiSnH_3$  and  $H_3GeSnH_3$ , and their phenyl, acetoxy, and chloride derivatives

AU Wiberg, Egon; Amberger, Eberhard; Cambensi, Hans

CS Univ. Munich, Munich, Fed. Rep. Ger.

SO Zeitschrift fuer Anorganische und Allgemeine Chemie (1967),  
351(3-4), 164-79

CODEN: ZAACAB; ISSN: 0044-2313

DT Journal

LA German

AB The compds.  $R_3MSnR_3$  (I), where R is OAc, Cl, H, or Ph and M is Si or Ge, were prepared. To prepare I ( $R = Ph, M = Ge$ ) (II), 90 ml. of a solution containing 10

millimoles  $Ph_3GeK$  in tetrahydrofuran (THF) was added dropwise at room temperature during 2-hrs. to a solution of 10 millimoles  $ClSnPh_3$  in 60 ml. THF

to give ppts. of  $KCl$ , II,  $Ph_6Ge_2$ , and  $Ph_6Sn_2$ . The solvent was distilled and the residue extracted with  $C_6H_6$  and hot  $H_2O$ . The products were resolved by fractional crystallization from  $C_6H_6$  to give an 86% yield of II. An 84% yield

of I ( $R = Ph, M = Si$ ) (III) was obtained analogously by using  $Ph_3SiK$ . A mixture of 7.44 millimoles II, 2.10 millimoles  $HOAc$ , and 6 ml.  $Ac_2O$  was refluxed 15 hrs. in a N atmospheric to give a 98% yield of I ( $R = OAc, M = Ge$ ), recrystd. from  $AcOH$ .  $(AcO)_3GeOSn(OAc)_3$  was obtained when the mixture was refluxed in the presence of air. IV was insol. in nonpolar solvents, slightly soluble in polar solvents, and decomposed at  $360^\circ$ , without prior melting. I ( $R = OAc, M = Si$ ) (V), was similarly prepared from III in 97% yield. To prepare I ( $R = Cl, M = Ge$ ) (VI), 3.54 millimoles IV was stirred 3.5 hrs. at  $-105^\circ$  with 15 ml. **liquid**  $HCl$  to give an orange suspension. Excess  $HCl$  was distilled. The residue was slowly warmed to  $-67^\circ$  with addition of 0.5 millimoles  $HCl$ . Then 3.6 millimoles  $HCl$  was added with foaming at  $-46^\circ$ . At  $-9^\circ$   $HOAc$  and VI were formed; the  $HOAc$  was removed at  $-78^\circ$  under high vacuum. VI (3.54 millimoles), which was formed at  $-9^\circ$ , was suspended at  $-85^\circ$  in 12 ml.  $Et_2O$ . A solution of 31 millimoles  $LiAlH_4$  in 39 ml.  $Et_2O$  was added dropwise to the suspension at  $-85^\circ$  to give H and I ( $R = H, M = Ge$ ) (VII). The  $Et_2O$  distillate obtained between  $-50^\circ$  and  $-196^\circ$  was enriched in VII, although VII readily volatilized from the  $Et_2O$  solution. VII was stable only in the  $Et_2O$  solution and an explosion can be expected upon evaporation of the solution to dryness. I ( $R =$

Cl,  $M = Si$ ) (VIII) was prepared similarly to VI at  $-100^\circ$ , and exhibited

no decomposition at 0°. VII and I (R = H, M = Si) (IX) were also prepared by reaction, with LiAlH<sub>4</sub>, of V suspended in Bu<sub>2</sub>O at -90° and IX suspended in Et<sub>2</sub>O at -40°, Me<sub>2</sub>O at -90°, or Bu<sub>2</sub>O at -80°, resp. VII and IX decomposed in more concentrated solns. at >-80° giving H<sub>4</sub>M, Sn, and H. The solid Sn catalyzed the decomposition

L9 ANSWER 26 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1966:473631 CAPLUS

DN 65:73631

OREF 65:13752h,13753a-b

TI Dimethyltin diacetate and its configuration

AU Maeda, Y.; Dillard, C. R.; Okawara, R.

CS Univ. Osaka, Japan

SO Inorg. Nucl. Chem. Letters (1966), 2(7), 197-9

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB Me<sub>2</sub>SnO (13.3 g.) was dissolved in large excess of Ac<sub>2</sub>O (10.3 g.) with heating, and the excess of unreacted Ac<sub>2</sub>O distilled under N. The residual **liquid** gave quant. on vacuum distillation solid Me<sub>2</sub>Sn(OAc)<sub>2</sub> (I), m. 67°, b. 93-4°/5 mm.; mol. weight 267 in C<sub>6</sub>H<sub>6</sub>. I was very soluble in nonpolar solvents and was hydrolyzed by atmospheric moisture, changing into 1,3-bisacetoxy distannoxane. The ir band positions of I [(in cm.<sup>-1</sup>) 528, sym. Sn-C, 574, asym. Sn-C, 1607, asym. COO, 1380, sym. COO] were essentially the same in the molten state at 85°, in a crystalline film at room temperature, and in .apprx.20% CCl<sub>4</sub> solution N.M.R. studies in CCl<sub>4</sub>

solution

and in molten state at 85° gave J(119 Sn-CH<sub>3</sub>) values of 82.5 and 81.7 cycles/sec., resp., indicating that the ratio of s-character in the Sn-C bonds was .apprx.40%. It was suggested that I had bidentate acetate groups with nonequiv. covalency in the Sn-O bonds as shown in the structure I.

L9 ANSWER 27 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1966:417936 CAPLUS

DN 65:17936

OREF 65:3301c-g

TI Halide alkoxides of tin(IV)

AU Mehrotra, R. C.; Gupta, V. D.

CS Univ. Rajasthan, Jaipur

SO J. Indian Chem. Soc. (1966), 43(3), 155-60

DT Journal

LA English

AB Halide alkoxides of Sn<sup>4+</sup> of the type (iso-PrO)<sub>4-n</sub>SnX<sub>n</sub>, where n = 1, 2, 3, and X = Cl, Br, were prepared by treating Sn isopropoxide isopropanolate (I) with acyl halides in stoichiometric ratios. Sn<sup>4+</sup> isopropoxide, prepared from tert-butoxide was repeatedly recrystd. from iso-PrOH. Sn ethoxide was prepared from tert-butoxide by alc. interchange. Sn halides were freshly distilled; acyl halides and organic esters were fractionated directly into the reaction systems. For the reaction between Sn alkoxides and acyl halides, to a solution of Sn alkoxide in dry C<sub>6</sub>H<sub>6</sub> was added AcBr or AcCl. The reactions were highly exothermic. The reaction mixture was refluxed for .apprx.45 min. at 90-100° and the volatile fractions were removed under reduced pressure. Reactant molar ratios were varied: 2.88-4.07 g. (iso-PrO)<sub>4</sub>Sn.iso-PrOH (I), 0.73-3.26 g. AcCl, in 8-28 g. of C<sub>6</sub>H<sub>6</sub>. Molar ratios and products were: at 1:1, (iso-PrO)<sub>3</sub>SnCl.iso-PrOH, a white solid, 3.65 g., crystallizes from C<sub>6</sub>H<sub>6</sub> and iso-PrOH; at 1:2, (iso-PrO)<sub>2</sub>SnCl<sub>2</sub>.iso-PrOH, a white solid, 3.3 g.; at 1:3, iso-PrOSnCl<sub>3</sub>.iso-PrOH, a white solid, 3.0 g., crystallized as needles from C<sub>6</sub>H<sub>6</sub>; at 1:4,

(AcO)0.5SnCl<sub>3</sub>.5.iso-PrOH.iso-

PrOAc (II), a colorless viscous **liquid**, 4.0 g., becoming a white solid after distillation at reduced pressure; at 1:6, II, a brown viscous

**liquid**, 2.8 g., solidifying as long needles. I, 1.78-4.09 g., was also reacted with 1.20-3.92 g. of AcBr in 18.0-27.0 g. of C<sub>6</sub>H<sub>6</sub>, obtaining, at molar ratios of 1:1, 1:2, and 1:3, 4.2, 3.1, and 2.6 g., resp., of the Br equivalent, white solids. At 1:4 and 1:6 molar ratios, 2.6 and 1.8 g. of SnBr<sub>4</sub>, a colorless **liquid**, was obtained. Sn(OEt)<sub>4</sub>, 5.3 g., was reacted with 5.6 g. of AcCl in 26.0 g. of C<sub>6</sub>H<sub>6</sub>, a molar ratio of 1:4, to yield 8.1 g. of SnCl<sub>4</sub>.2EtOAc, a brown viscous **liquid**. Iso-PrOAc (6.26 g.) was reacted exothermally with 3.9 g. of SnCl<sub>4</sub>; after refluxing and drying 4.1 g. of a white solid was obtained which sublimed unchanged. Mixing of 8.3 g. of iso-PrOAc and 5.05 g. of SnBr<sub>4</sub> led to the evolution of slight amount of heat; after the solvent was removed 4.9 g. of a light brown viscous **liquid** was obtained. HCl gas was bubbled into 3.27 g. of I in 40 g. of C<sub>6</sub>H<sub>6</sub> till the mixture cooled down to room temperature; 2.81

g. of

a white solid was obtained after drying under reduced pressure. A similar reaction of 3.08 g. of I with HBr yielded 3.6 g. of an immiscible yellowish brown oily **liquid**. A white solid (3.1 g.) was obtained after removing excess iso-PrOH from the mixture of 4.6 g. of SnBr<sub>4</sub>, and 18.0 g. of iso-PrOH after refluxing. The reaction mixture of 2.05 g. of I and 1.82 g. of (iso-PrO)<sub>2</sub>SnCl<sub>2</sub> in 80 g. of iso-PrOH was refluxed and alc. was removed to yield 3.6 g. of a crystalline solid. A white solid, 0.6 g., was obtained when 0.62 g. of SnCl<sub>4</sub> was refluxed with excess of tert-BuOAc for 30 min.

L9 ANSWER 28 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1965:447050 CAPLUS

DN 63:47050

OREF 63:8577g-h,8578a-c

TI Polyurethan foams

IN Hostettler, Fritz

PA Union Carbide Corp.

SO 19 pp.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3194773		19650713	US	19581125 <--
AB	<p>Polyether-polyurethan foams with higher tensile and compressive strengths, and which require neither the usual prepolymer preparation nor high temps. after cure, are described. They are prepared by reaction of a polyether, an organic polyisocyanate, and a blowing agent in the presence of an organotin catalyst and a surfactant, which is a polysiloxane-oxyalkylene copolymer. Suitable polyethers are polyethylene glycols (mol. wts. 200-600), propylene glycols (mol. wts. 400-2000), and block copolymer ethers of a glycol and propylene oxide (mol. wts. 500-4000), such as the propylene oxide adducts of ethylene glycol, 1,2,6-hexanetriol, pentaerythritol, and triethanolamine. Rigid foams are produced from low-mol.-weight polyethers and flexible foams from high-mol.-weight polyethers. Suitable polyisocyanates include hexamethylene diisocyanate, xylylene diisocyanate, phenylene and tolylene diisocyanates. The blowing agent may be H<sub>2</sub>O or a <b>liquid</b> fluorocarbon which vaporizes at or below the temperature of the foaming reaction product, such as di- and trichlorofluoromethane. The amount of blowing agent used determine the d. of the foamed product. The Sn compds. with optimum catalytic activity have 1-3 C bonds directly bonded to an Sn atom and ≥1 catalytically intensifying bonds from the C atom to a halogen, O, S, N, or P atom. Suitable Sn compds. are trimethyltin chloride, butyltin triacetate, dimethyltin oxide, and dibutyltin dilaurate. The siloxaneoxyalkylene copolymer surfactants include the linear and branched copolymers of polymeric alkylene oxides and polymeric dialkylsiloxanes and the copolymers of an alkylene oxide and a dialkylsiloxane. The foam reaction mixture comprises 1.5-6.0 moles of</p>				

polyisocyanate per mole of polyether; organotin catalyst, 0.2-0.5% by weight of the total reactants; H<sub>2</sub>O in the ratio of 0.8 to 1.2:1 OH groups to isocyanate groups; siloxane-oxyalkylene copolymer, and 0.3-0.8% by weight of the total reactants. Thus, a mixture was made of (a) 100 g. of a polyether prepared by the reaction of propylene oxide and 1,2,6-hexanetriol and having an OH number of 113 and a COOH number of 0.19; (b) 42 g. of a 65:35 mixture of 2,4- and 2,6-tolylene diisocyanate containing 0.14% Ethocel; (c) 2.5 g. H<sub>2</sub>O; (d) 0.5 g. dibutyltin dilaurate; and (e) 0.5 g. of a copolymer of a triethoxy-end-blocked, branched-chain dimethylpolysiloxane (mol. weight 858) and a methoxy-end-blocked polyoxyethylene glycol (mol. weight 750). As soon as the mixture started to foam, it was transferred to an open mold from which it could be removed after 15 min. The foam d. was 3.28; tensile strength, 15 psi.; compression load at 50% elongation, 1.14 psi.; and compression set, 10.2%.

L9 ANSWER 29 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1964:408685 CAPLUS

DN 61:8685

OREF 61:1388h,1389a

TI The coordinated structure of some alkyltin compounds

AU Sato, Hiroyasu; Okawara, Rokuro

CS Univ. Osaka, Japan

SO Proc. Intern. Symp. Mol. Struct. Spectry., Tokyo (1962), (A308), 4 pp.

DT Journal

LA Unavailable

AB Far-infrared spectra of Me<sub>3</sub>SnOOCH and Me<sub>2</sub>Sn(OOCH)<sub>2</sub> show absorption around 303 cm.<sup>-1</sup> due to weak coordination of O . . . Sn. The carbonyl frequencies show that in the solid state, trialkyltin carboxylate has a bridge structure while in solution it has a monomer structure. Dialkyltin dicarboxylates have chelate structure both in solution and **liquid** states. Alkyltin carbonate, nitrate, and sulfate show reduced symmetry C<sub>2v</sub>, of the anions. The pyramidal structure of the C<sub>3</sub>Sn group is shown by 2 bands due to Sn-C stretching.

L9 ANSWER 30 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1963:482314 CAPLUS

DN 59:82314

OREF 59:15297f-h

TI Structure of some organotin salts of carboxylic acids

AU Slobokhotova, N. A.; Faizi, N. A.; Zemlyanskii, N. N.; Panov, E. M.; Kocbeshkov, K. A.

SO Zhurnal Obshchei Khimii (1963), 33(8), 2610-13  
CODEN: ZOKHA4; ISSN: 0044-460X

DT Journal

LA Unavailable

GI For diagram(s), see printed CA Issue.

AB The infrared spectra (shown) of diethyltin salts of adipic, azelaic, and sebacic acid have shown that these have a cyclic structure of type I. These results were confirmed by ebullioscopically determined mol. wts. The adipate m. 143-4°, azelate m. 121-4.5°, and sebacate m. 122-3°. Et<sub>3</sub>SnOAc m. 133-4°; Bu<sub>2</sub>Sn(OAc)<sub>2</sub> a **liquid**, b<sub>10</sub> 142-5°. The cyclic structures were deduced from the spectra in the 400-2000 cm.<sup>-1</sup> region by comparison with the spectra of the open-structure salts.

L9 ANSWER 31 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1963:57167 CAPLUS

DN 58:57167

OREF 58:9756c-e

TI The Moessbauer resonance absorption of γ-quanta in organotin compounds

AU Aleksandrov, A. Yu.; Delyagin, N. N.; Mitrofanov, K. P.; Polak, L. S.; Shpinel, V. S.  
 SO Doklady Akademii Nauk SSSR (1963), 148, 126-8  
 CODEN: DANKAS; ISSN: 0002-3264  
 DT Journal  
 LA Unavailable  
 AB The absorption spectra of 23.8-k.e.v.  $\gamma$ -quanta by 22 organotin compds. were investigated at **liquid** N temps. The compound, the isomeric shift relative to SnO<sub>2</sub> in mm./sec., and the quadrupole splitting in mm./sec. (7.94 gives them in 10<sup>-8</sup> e.v.) are given: SnEt<sub>4</sub>, 1.33 ± 0.08, 0; SnPh<sub>4</sub>, 1.25 ± 0.10, 0; SnBu<sub>4</sub>, 1.35 ± 0.10, 0; SnPr<sub>4</sub>, 1.30 ± 0.07, 0; Sn(CH<sub>2</sub>CH<sub>2</sub>CN)<sub>4</sub>, 1.30 ± 0.07, 0; Bu<sub>2</sub>Sn(AcO)<sub>2</sub>, 1.40 ± 0.10, 3.45 ± 0.10; Bu<sub>2</sub>Sn(C<sub>7</sub>H<sub>15</sub>COO)<sub>2</sub>, 1.45 ± 0.10, 3.45 ± 0.10; Bu<sub>2</sub>Sn(C<sub>11</sub>H<sub>23</sub>COO)<sub>2</sub>, 1.45 ± 0.20, 3.50 ± 0.20; Bu<sub>2</sub>Sn(C<sub>17</sub>H<sub>35</sub>COO)<sub>2</sub>, 1.45 ± 0.10, 3.30 ± 0.10; Bu<sub>2</sub>Sn(OCOCCH<sub>3</sub>CH<sub>2</sub>)<sub>2</sub>, 1.40 ± 0.20, 3.50 ± 0.20; Bu<sub>2</sub>SnC<sub>4</sub>H<sub>2</sub>O<sub>4</sub>, 1.50 ± 0.10, 3.50 ± 0.15; Bu<sub>2</sub>Sn(CH<sub>2</sub>ClCOO)<sub>2</sub>, 1.60 ± 0.10, 3.65 ± 0.10; Bu<sub>2</sub>Sn(CCl<sub>3</sub>COO)<sub>2</sub>, 1.65 ± 0.10, 3.80 ± 0.10; FSn(CH<sub>2</sub>CH<sub>2</sub>CN)<sub>3</sub>, 1.35 ± 0.10, 3.50 ± 0.10; ISn(CH<sub>2</sub>CH<sub>2</sub>CN)<sub>3</sub>, 1.45 ± 0.08, 2.96 ± 0.08; BrSn(CH<sub>2</sub>CH<sub>2</sub>CN)<sub>3</sub>, 1.48 ± 0.08, 3.04 ± 0.08; Bu<sub>3</sub>SnBr, 1.70 ± 0.10, 3.30 ± 0.10; Bu<sub>3</sub>SnCl, 1.65 ± 0.10, 3.30 ± 0.10; BuSnCl<sub>3</sub>, 1.70 ± 0.10, 3.40 ± 0.10; Et<sub>3</sub>SnOH, 1.35 ± 0.07, 3.00 ± 0.07; Bu<sub>3</sub>SnOSnBu<sub>3</sub>, 1.20 ± 0.05, 1.15 ± 10; Bu<sub>2</sub>Sn(OH)OSn(OH)Bu<sub>2</sub>, 1.50 ± 0.10, 3.20 ± 0.10.

L9 ANSWER 32 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1962:420502 CAPLUS  
 DN 57:20502  
 OREF 57:4140f-g  
 TI The effect of the chemical structure of organic ligands on the polarity of complex compounds  
 AU Osipov, O. A.; Minkin, V. I.; Kogan, V. A.  
 SO Zhurnal Fizicheskoi Khimii (1962), 36, 889-94  
 CODEN: ZFKHA9; ISSN: 0044-4537  
 DT Journal  
 LA Unavailable  
 AB The dipole moments of complexes of SnCl<sub>4</sub> and GeCl<sub>4</sub> with organic ligands containing different functional groups where O is the donor were measured in **liquid** solns. at 20°. The functional groups OH, COOH, COOR, (CO)<sub>2</sub>O, CO, O, CHO, and NO<sub>2</sub> greatly affect the rise of the dipole moment which depends directly on the polarity of the ligand. The dipole moment is inversely proportional to the size of the aliphatic or aromatic radical. Halides lower the dipole moment in the order Cl < Br < I. By comparing complexes of the types SnCl<sub>4</sub>.2C<sub>3</sub>H<sub>7</sub>COOR and ZrCl<sub>4</sub>.2CH<sub>3</sub>-COOH, it was found that enlarging the R groups has a negligible effect on the dipole moments of the organic compds.

L9 ANSWER 33 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1962:404059 CAPLUS  
 DN 57:4059  
 OREF 57:848h-i,849a-i,850a-b  
 TI 1,2-Diacyloxyditins: A new class of organotin compound  
 AU Sawyer, Albert K.; Kuivila, Henry G.  
 CS Univ. of New Hampshire, Durham  
 SO Journal of Organic Chemistry (1962), 27, 610-14  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DT Journal  
 LA Unavailable  
 AB In the reactions of diphenyltin dihydride (I) with carboxylic acids, 1,1,2,2-tetraphenyl-1,2-diacyloxyditins were formed. With dibutyltin dihydride (II) and carboxylic acids, either this type of ditin or simple dibutyldiacyloxytin was formed, depending on the acid and the acid-hydride ratio. Quant. yields of 1,2-diacyloxyditins were also obtained in

reactions of II with dibutyldiacyloxytins in equimolar ratio. Reactions between Br and 1,2diacyloxyditins could be used for quant. determination of the latter and led to the formation of disubstituted acyloxybromotins. Preparation of I and II. I was prepared by reduction of  $\text{PH}_2\text{SnCl}_2$  with  $\text{LiAlH}_2$  in Et<sub>2</sub>O and the solution after drying over  $\text{CaCl}_2$  treated in one of 3 ways according to the desired use. Procedure A. The Et<sub>2</sub>O solution of I (about 0.4M) or portions of it were used directly for reactions with acids. Procedure B. The Et<sub>2</sub>O solution was concentrated by aspirator to about 1/5 volume and this concentrate used for reactions with acids. This was desirable in case the reaction went slowly in dilute solns. Procedure C. The solution was concentrated to

constant weight by aspirator, cooled to  $-80^\circ$ , whereupon the hydride solidified; this minimized decomposition. The hydride was removed from the bath, warmed to room temperature, the required amount weighed, and used directly

or dissolved in anhydrous Et<sub>2</sub>O. II was prepared by essentially the same method as above. The ether solution was concentrated and the concentrate distilled,

b0.5

50-2°, 83-6% yield. Typical reactions involving I by procedure A: I (0.0500 mole) in 120 ml. Et<sub>2</sub>O treated with 0.100 mole hexanoic acid (evolution of gas started and was 90% complete in 8 hrs.) and the solution concentrated gave 14.8 g. impure 1,1,2,2-tetraphenyl-1,2-dihexanoyloxyditin (IIa); recrystn. dropped the yield to 49%, m.  $85-7^\circ$ . Procedure B: I (0.050 mole) in 25 ml. Et<sub>2</sub>O treated with 0.40 moles  $\text{Cl}_2\text{CHCO}_2\text{H}$  3 hrs. and the product crystallized gave 2.81 g. 1,1,2,2-tetraphenyl-1,2-bis(dichloroacetoxy)ditin, m.  $169^\circ$  (decomposition). Procedure C: I (7.16 g.) mixed with 5.85 g. o-chlorobenzoic acid and 35 ml. Et<sub>2</sub>O (measurement of gas volume showed the reaction was complete in 20 hrs.) and the product recrystd. gave 5.04 g. 1,1,2,2-tetraphenyl-1,2-bis(o-chlorobenzoyloxy)ditin, m.  $161^\circ$ . In addition to the above 3 examples, the following reactions of I with  $\text{RCO}_2\text{H}$  gave 1,1,2,2-tetraphenyl-1,2-diacyloxyditins ( $\text{RCO}_2\text{H}$ , procedure, ratio of acid to I, % yield, moles H/mole I, m.p. of product given);  $\text{HCO}_2\text{H}$ , B, 0.8, -, 1.26, -;  $\text{AcOH}$ , B, 0.8, 75, 1.22,  $152^\circ$ ;  $\text{ClCH}_2\text{CO}_2\text{H}$ , C, 0.8, 83, 1.57,  $150^\circ$ ;  $\text{ClCH}_2\text{CO}_2\text{H}$ , A, 2.0, 35, 1.31,  $150^\circ$ ;  $\text{Cl}_3\text{CCO}_2\text{H}$ , A, 2.0, 35, 0.55,  $170^\circ$ ;  $\text{Cl}_3\text{CCO}_2\text{H}$ , A, 2.5, 32, 0.96,  $165^\circ$ ;  $\text{BaOH}$ , C, 1.5, 68, 1.52,  $185^\circ$ ; o-hydroxybenzoic acid, A, 2.0, 32, 1.29,  $197^\circ$ ; octanoic acid, A, 2.0, 7, 1.48,  $86-8^\circ$ . II (4.7 g.) treated with 2.4 g.  $\text{AcOH}$  (gas evolution was complete in 4.5 hrs.) and the liquid product distilled gave 6.32 g. dibutyltin diacetate (III), b1  $112-14^\circ$ , m. 8.  $5-10.0^\circ$ , n<sub>26D</sub> 1.4692. In order to determine if the solvent had any effect, the reaction was carried out as above except that 25 ml. Et<sub>2</sub>O was mixed with II before addition of  $\text{AcOH}$ ; gas evolution was complete in 24 hrs. and the yield of III was 90%. II (4.7 g.) treated with 1.2 g.  $\text{AcOH}$  (reaction complete in 10 hrs.) gave 68% III. The remaining liquid (5.53 g.) mixed with 12 ml. Et<sub>2</sub>O and left overnight at  $-70^\circ$  gave 3.35 g. 1,1,2,2-tetrabutyl-1,2-diacetoxyditin (IV), m.  $-7$  to  $-4^\circ$ , n<sub>26D</sub> 1.5060. II (4.7 g.) treated with 7.2 g. III in 18 hrs. gave 10.06 g. IV. In 2 sep. runs 94% of the theoretical amount of Br in  $\text{CCl}_4$  reacted with the ditin. II (from 0.100 mole  $\text{Bu}_2\text{SnCl}_2$ ) and 0.100 mole  $\text{LiAlH}_4$  in 90 ml. Et<sub>2</sub>O at  $0^\circ$  evaporated, the product mixed with 2.95 g.  $(\text{CH}_2\text{CO}_2\text{H})_2$  and 25 ml. Et<sub>2</sub>O, and the mixture stirred 2.5 days gave 92% impure dibutyltin succinate (IV), m.  $186-7.5^\circ$ . IV (1.74 g.) and 1.17 g. 88% II added to 10 ml.  $\text{C}_6\text{H}_6$  (gas evolved 6 hrs.) gave product, isolated as a sirupy yellow solution. It was treated to remove solvent at  $100^\circ$ , then kept several hrs. at 1 mm.; 2 sep. portions of the solid showed 92% and 94% corresponding ditin. In the reactions of II with  $\text{RCO}_2\text{H}$  to form  $\text{Bu}_2\text{Sn}(\text{OCOR})_2$  (A) and  $(\text{Bu}_2\text{SnOCOR})_2$  (B), 0.00220 mole  $\text{RCO}_2\text{H}$  in 2.00 ml. dioxane was added to 0.470 g. II of 88% purity (gas evolution was complete within 6-16 hrs.) and the product titrated with Br in  $\text{CCl}_4$ . The relative amts. of A and B formed were calculated from the Br analysis and the total gas produced. The number of moles of B was calculated from the number of moles of

used by the reaction depicted. The number of moles of gas produced during the formation of B was calculated as equal to 3 times the number of moles of B

by

the reaction as shown. The number of moles of gas formed in producing A was considered equal to the total number of moles of gas minus the number of moles of gas obtained in forming B. The % of A and B produced were based on II. The reactions of II with RCO<sub>2</sub>H to form A and B in addition to the above results were as follows (RCO<sub>2</sub>H, ratio of acid to II, type of product, % yield, % B, moles H/mole of II, m.p. given): ClCH<sub>2</sub>CO<sub>2</sub>H, 2.0, A, 80.5, trace, 1.94, 87-9°; Cl<sub>2</sub>CHCO<sub>2</sub>H, 2.0, A, 16, -, 1.98, 112-14°; Cl<sub>3</sub>CCO<sub>2</sub>H, 2.0, anal. pure sample not isolated, sample not isolated, -, 1.13, -; Cl<sub>3</sub>CCO<sub>2</sub>H, 2.0, A, anal. pure sample not isolated, trace, 1.99, -; BzOH, 2.0, A, 52, 9, 1.63, 68-71°; BzOH, 1.0, B, 65, 69, 1.41, 31.5-2.5°; o-chlorobenzoic, 0.76, B, 60, -, 1.78, 65-6.5°; p-chlorobenzoic, 0.80, B, 15.5, -, 1.69, 75-7°; lauric, 0.77, B, 96, -, 1.66, -. In the reactions of II with RCO<sub>2</sub>H in dioxane to form A and B the following results were obtained (RCO<sub>2</sub>H, ratio of acid to hydride, % of A, % of B, moles of H/moles of II given): HCO<sub>2</sub>H, 2.5, 100, 2, 2.12; HCO<sub>2</sub>H, 1.25, 48.3, 51.3, 1.74; AcOH, 1.25, 9, 82, 1.41; AcOH, 1.25, 11, 80, 1.41; AcOH, 2.50, 54, 36, 1.62; ClCH<sub>2</sub>CO<sub>2</sub>H, 1.25, 50, 38, 1.57; Cl<sub>2</sub>CHCO<sub>2</sub>H, 1.25, 50, 38, 1.57; Cl<sub>2</sub>HCCO<sub>2</sub>H, 1.25, 33, 3.5, 0.71; Cl<sub>3</sub>CCO<sub>2</sub>H, 1.25, 9, 3.8, 0.24; Cl<sub>3</sub>CCO<sub>2</sub>H, 1.25, 12, 53, 0.79; BzOH, 1.25, 26, 69, 1.55; BzOH, 2.50, 80, 13, 1.78; o-chlorobenzoic, 1.25, 47.3, 48.5, 1.65; p-methylbenzoic, 1.25, 39, 64, 1.72. IIa (2 g.) in a test tube preheated to 156° at 23 mm. left 3 hrs. gave a sublimate and 1.73 g. tan residue. Treatment of this residue with hot C<sub>6</sub>H<sub>6</sub> dissolved 1.56 g. product from which on cooling 0.87 g. crystals deposited, shown to be Ph<sub>4</sub>Sn, m. 224-6°. The sublimate was tin acetate, m. 189-90°. Of this product, 43% was stannous acetate and 5.1 g. a black residue. IV (5.85 g.) treated with 4% Br in CCl<sub>4</sub>, evaporated, and crystallized gave 4.61 g. dibutylacetoxystin bromide, m. 67.0-8.5° (ligroine).

L9 ANSWER 34 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1962:43116 CAPLUS

DN 56:43116

OREF 56:8154d-f

TI Molar refraction. Extension of the Eisenlohr-Denbigh system of correlation to liquid organotin compounds

AU Sayre, Ralph

CS Am. Cyanamid Co., Stamford, CT

SO Journal of Chemical and Engineering Data (1961), 6, 560-4

CODEN: JCEAAX; ISSN: 0021-9568

DT Journal

LA Unavailable

AB cf. Vickery and D., CA 43, 5242i.--Observed values of molar refractivity are compared with Lorenz-Lorentz calculated values based on atomic and on bond values. Similarly, observed values of molar refraction product are compared with calculated Eisenlohr values for atomic and bond systems. All

four

comparisons are given for 147 organotin compds. Atomic and bond values for Sn, as well as group values for tertiary and quaternary C atoms, were calculated by least squares from the 147 sets of data; atomic refractivities

for

these three moieties were 14.156, 3.791, and 2.981, and atomic refraction consts. were 197.90, 22.00, and 23.41, resp. Bond refractivities and refraction consts. were, resp.: 4.170 and 54.09 for SnC (aliphatic); 4.548 and 64.14 for SnC (aromatic); 8.664 and 100.75 for SnCl; 11.971 and 179.65 for SnBr; 17.407 and 259.40 for SnI; 2.928 and 61.81 for SnO; 7.631 and 84.46 for SnS; and 10.683 and 114.81 for SnSn.

L9 ANSWER 35 OF 35 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1961:147072 CAPLUS  
DN 55:147072  
OREF 55:27875a-c  
TI Stannous siloxanes for use as lubricants  
IN Simmler, Walter; Merten, Rudolf  
PA Farbenfabriken Bayer Akt.-Ges.  
DT Patent  
LA Unavailable  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1099743		19610219	DE	<--
AB	Stannous siloxanes were prepared from organotin acylates and siloxanes. Thus, 8.2 g. of tetraethoxy-1,3-diphenyl disiloxane and 70 g. of 1,19-diethoxymethyldecasiloxane were stirred at 170-80° while 28 g. of di-n-butyltin diacetate was added dropwise. EtOAc was distilled off to leave a residue of stannous siloxane oil containing 3.3% EtO groups. A mixture of 40 g. of this oil and 40 g. polyethylene propylene glycol monoalkyl ethers of mol. weight 1400 in 250 ml. toluene together with an ester-interchange catalyst, such as isophthalyl chloride, trifluoroacetic acid, AcCl, or NaOEt, was stirred under reflux. The toluene and EtOH were removed in vacuo under N to leave a polyether-stannous siloxane which was a viscous <b>liquid</b> .				

=> S TIN CAPROATE  
244554 TIN  
3303 CAPROATE  
L10 3 TIN CAPROATE  
(TIN(W).CAPROATE)

=> D 1-3 BIB ABS

L10 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1986:131499 CAPLUS  
DN 104:131499  
TI Preparation of 2-ethylcaproic acid, lead caproate and **tin caproate**  
AU Li, Shaoxiong; Chen, Fengqin; Wang, Yier  
CS Jiangsu Provincial Inst. Chem. Eng., Peop. Rep. China  
SO Tuliao Gongye (1985), 88, 23-5  
CODEN: TLKYD5; ISSN: 0253-4312  
DT Journal  
LA Chinese  
AB Reaction of 2-ethylhexanol [104-76-7] with 40% NaOH in the presence of CdO gave 2-ethylcaproic acid [149-57-5], which was treated with NaOH to give sodium 2-ethylcaproate [19766-89-3], which was treated with lead acetate [15347-57-6] at 110-120° in vacuum to give lead caproate (I) [41234-05-3] and with SnCl2 to give tin tin 2-ethyldicaproate (II) [301-10-0]. I and II were useful as driers for coatings and as catalysts for the preparation of polyurethanes and silicone rubber.

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1982:564389 CAPLUS  
DN 97:164389  
TI Electric insulation composition  
IN Gushchin, V. V.; Kotov, E. P.; Chistyakov, V. A.; Shalaev, B. I.  
PA USSR  
SO U.S.S.R.  
From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (34), 260.  
CODEN: URXXAF  
DT Patent



LA Russian

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 864344	A1	19810915	SU 1979-2809021	19790810
PRAI	SU 1979-2809021		19790810		

AB Potting composition is described containing 1.5-3.5% Et siloxane, 0.05-0.1% Et<sub>2</sub>Sn

dicaproate or octoate, and silicone rubber balance. The composition is used for potting radio components coated with silicone lacquers and shows good adhesion and durability.

L10 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1977:121855 CAPLUS

DN 86:121855

TI Study of complexing on a catalyst during polymerization of formaldehyde on tin(II) salts by a  $\gamma$ -resonance spectroscopic method

AU Kessler, G. E.; Rochev, V. Ya.; Romanov, L. M.; Kevdin, O. P.

CS Inst. Khim. Fiz., Moscow, USSR

SO Vysokomolekulyarnye Soedineniya, Seriya A (1977), 19(2), 416-18  
CODEN: VYSAAF; ISSN: 0507-5475

DT Journal

LA Russian

AB The catalytic complex formed in the initial stages of polymerization of gaseous HCHO [50-00-0] in the presence of tin(2+) caproate (I) [13170-69-9] had structure (C<sub>5</sub>H<sub>11</sub>CO<sub>2</sub>)<sub>2</sub>Sn•HCHO, whereas the catalytic complex present in the last stages of the reaction represented a complex of I with the polymer chain. Structures of the initial and final catalytic complexes were established by comparison of the Moessbauer effects of the complexes of I with HCHO obtained by different methods, of poly(oxymethylene) obtained on I, and of several model compds.